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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,975	07/07/2003	Michael Redecker	61610066AA	6522

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,975

Applicant(s)

REDECKER, MICHAEL

Examiner

Kevin Quarterman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 August 2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Leising (US 6,117,529).

4. Regarding independent claim 1, Figure 3 of Leising shows a display comprising a substrate (1) with a plurality of sub-pixels arranged on at least a first side of the substrate, wherein a sub-pixel comprises a first electrode (2) having a first polarity; a second electrode (6) having a second polarity; and an emitter layer (3), wherein the emitter layer is interposed between the first electrode and the second electrode; an excitation light source (col. 11, ln. 46-49) for projecting light to the emitter layer; a photoluminescence light emitted from the emitter layer; and an electrical field formed

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between the first electrode and the second electrode which controllably quenches the photoluminescence light from the emitter layer (col. 13, ln. 22-54).

5. Regarding claim 2, Leising discloses the substrate formed of a transparent material (col. 9, ln. 42-44), the first electrode adjacent to the first side of the substrate, the first electrode formed of a transparent material (col. 11, ln. 36-40), and the second electrode formed of a light-reflecting material (col. 11, ln. 12-20).

6. Regarding claim 3, the first electrode adjacent to the first side of the substrate, the first electrode formed of a light-reflecting material (col. 11, ln. 12-20), and the second electrode formed of a transparent material (col. 11, ln. 36-40).

7. Regarding claim 4, Leising discloses the first electrode and the second electrode formed of a transparent material (col. 11, ln. 36-40).

8. Regarding claim 5, Figure 3 of Leising shows a dielectric mirror (10) arranged on the sub-pixels and the first electrode and the second electrode formed of a transparent material (col. 11, ln. 36-40).

9. Regarding claim 6, Figure 3 of Leising shows a dielectric mirror (10) arranged on the sub-pixels and the first electrode and the second electrode formed of a transparent material (col. 11, ln. 36-40).

10. Regarding claim 7, the Examiner notes that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining the patentability of the apparatus claim (MPEP § 2115). Thus, the properties of the operation of the photoluminescence quenching device have not been given patentable weight.

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11. Regarding claim 8, Leising discloses the emitter layer formed of at least one of a low molecular organic material, and a light-emitting polymer, and wherein the light-emitting polymer is one of polyphenylene vinylene and polyfluorene (col. 8, ln. 64-66).

12. Regarding claim 9, Figure 4 of Leising shows a hole transport layer (12) interposed between the first electrode and the emitter layer, the hole transport layer formed of at least one of polyethylene dioxy thiophene, polystyrene sulfone acid, and polyaniline (col. 13, ln. 4-20).

13. Regarding claim 10, Leising discloses the excitation light source being a lamp (col. 13, ln. 48-53).

14. Regarding claim 11, Leising discloses the excitation light source being a light-emitting diode (col. 11, ln. 45-48).

15. Regarding claim 12, Leising discloses the excitation light source located outside of the display (col. 11, ln. 45-48).

16. Regarding claim 13, Figure 3 of Leising shows an optical unit (10) which can adjust the light emitted from the emitter layer.

17. Regarding claim 14, Figure 1 of Leising shows a screen on which an image is formed with the light emitted from the emitter layer.

18. Regarding claim 15, Leising discloses the dielectric mirror having a bandwidth narrower than a wavelength of the light emitted from the emitter layer (col. 14, ln. 56-62).

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19. Regarding claim 16, Leising discloses the dielectric mirror having a bandwidth narrower than a wavelength of the light emitted from the emitter layer (col. 14, ln. 56-62).

20. Regarding claim 17, Leising discloses the dielectric mirror including a plurality of refraction layer having different refractive indices (col. 14, ln. 56-59).

21. Regarding claim 18, Leising discloses the dielectric mirror including a plurality of refraction layer having different refractive indices (col. 14, ln. 56-59).

22. Regarding claim 19, Leising discloses a low-refractive index refraction layer of the plurality of refraction layer formed of at least one of silicon dioxide, silicon nitride, and magnesium fluoride, and a high-refractive index refraction layer of the plurality of refraction layers formed of at least one of titanium dioxide, tin oxide, zirconium oxide, and tantalic oxide (col. 14, ln. 56-59).

Response to Arguments

23. Applicant's arguments filed 28 August 2006 have been fully considered but they are not persuasive.

24. In response to applicant's argument that Leising fails to teach an excitation light source, the Examiner respectfully disagrees. Applicant submits that although the word "excite" appears in Leising, it is improper to imply the use of an excitation *external* light source. The claims of the instant application do not require the excitation light source to be an external light source. The Examiner also notes that applicant discloses that the excitation light source may be an internal or external light source (pg. 5, ln. 11-13).

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Thus, the Examiner holds that Leising teaches an excitation light source as claimed in the instant application.

25. In response to applicant's argument that Leising does not teach an electric field that controllably quenches the photoluminescence light from the emitter layer, the Examiner respectfully disagrees. The Examiner notes that while features may be recited either structurally or functionally, claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114). Leising discloses the electric field determining electroluminescence of the emitter layer (col. 13, ln. 26-30) and also discloses quenching being reduced by lowering the operating field strengths (col. 13, ln. 40-45). Thus, the Examiner holds that Leising teaches an electrical field that controllably quenches the photoluminescence light from the emitter layer as claimed in the instant application.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin Quarterman
Examiner
Art Unit 2879

kq

23 September 2006


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